Work Order ID 109635 *109635*

November-22-13 9:51:29 AM

Item ID: D2565-107 D2565-107 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Strut B109636 **Stop** *NS2*

Start Date: 11/22/13 **Start Qty:** 10.00 *10* **Cust Item ID:**

Required Date: 12/06/13 **Req'd Qty:** 10.00 *10* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** MLS **Date:** 13-11-22 **Tooling:** ____ **Date:** ____

QC: ____ **Date:** ____ **SPC (Y/N):** ____ **Date:** ____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D2565	**Revision Nbr** Rev E								
100 *100* Brake NC	Punch ends and deburr as per dwg NC BRAKE	0.00		DAS 30 9-89		10			13/11/26
Brake NC	**Memo** Punch as per Dwg D2565 using DT 8313	0.00							
110 *110* Small Fab	Small Fab	0.00				10x			DAS 36 9-89 13/12/10
Small Fab	**Memo** Deburr	0.00							
120 *120* QC	QC5- Inspect part completeness to step on W/O	0.00	DAS 27 9-89 13/12/10			10			
Quality Control	**Memo**	0.00							

DQA: ________ Date: ________

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: ______	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ______	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ______	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Power Loss/Surge	☐ Other
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread	______	
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	______	
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	______	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

Work Order ID 109635

November-22-13 9:51:29 AM

109635

Item ID:	D2565-107	**Accept**	*N900040100*
Revision ID:		**Setup Start**	*NS1*
Item Name:	Strut	**Stop**	*NS2*
Start Date:	11/22/13	**Start Qty:** 10.00 *10*	**Cust Item ID:**
Required Date:	12/06/13	**Req'd Qty:** 10.00 *10*	**Customer:**
Reference:			

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________ **Run Start** *NR1*

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel M126834. **Memo** START TIME: 3:35 OVEN TEMPERATURE: 400° FINISH TIME: 4:05	0.00 0.00				10	ϕ	13-12-10	DAS 34 9-89
140 *140* QC Quality Control	QC3- Inspect Part Finish **Memo**	0.00 0.00	DAS 27 9-89 13|12|11			10			
150 *150* Packaging Packaging	Identify as per dwg & Stock Location: ST252. **Memo**	0.00 0.00				10✓		13-12-11	DAS 26 9-89

DQA: ________ Date: ________

QA Closed: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: ________	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ________	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ________	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Power Loss/Surge	☐ Other
☐ Inspection Strip in Tube	☐ Drawing	☐ Misread	________	
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	________	
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	________	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

Work Order ID 109635

November-22-13 9:51:29 AM

109635

Item ID: D2565-107 **Accept** *N900040100* **Setup** **Start** *NS1*

Revision ID:

Item Name: Strut **Stop** *NS2*

Start Date: 11/22/13 **Start Qty:** 10.00 *10* **Cust Item ID:**

Required Date: 12/06/13 **Req'd Qty:** 10.00 *10* **Customer:**

Reference:

Approvals: **Process Plan:** ________ **Date:** ________ **Tooling:** ________ **Date:** ________ **Run** **Start** *NR1*

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160*	QC21- Final Inspection - Work Order Release	0.00							RL 13-12-16
QC Quality Control	**Memo**	0.00							

CL 13/12/11

DQA: __________ Date: __________

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

Work Order: ______ Part No. ______ NCR No. ______	**DISPOSITION** Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	**AGAINST DEPARTMENT/PROCESS** Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other ______

Picklist Print

November-22-13 9:51:32 AM

Work Order ID: 109635 *109635*

Parent Item: D2565-107 *D2565-107*

Parent Item Name: Strut

Start Date: 11/22/13 **Required Date:** 12/06/13

Start Qty: 10.00 **Required Qty:** 10.00

Comments: IPP: F02.04.16Added dwg Rev.C1NG

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.049 *M304TR0 750W 049* 304 RD Tube .750 x .049W		Purchased	No			100	f	337.8490	1.1191 **	12	DAS 30 9-89		13 11 26

Location	Loc Qty	Loc Code
MAT017	337.849018	
122312	10.8	
124768	55.31245	
M126183	238.620001	
M126349	33.116567	

1.5
9.5 10
1.5

DQA: ____________ Date: ____________

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date:

Work Order update only ☐

Work Order: ______	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ______	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ______	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Folio/Program	☐ Outside Dimensions	☐ Pressure/Forced
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Set-up
☐ Cracks	☐ Broken/Damage/Defect	☐ Hardware	☐ Part Incorrect	☐ Temperature/Cure
☐ Crimp/Kink/Ripple/Wave	☐ Burrs	☐ Inspection Incomplete/Unqualified	☐ Part Lost/Missing	☐ Weld
☐ Cuffs	☐ Contamination	☐ Instructions Incomplete/Unclear	☐ Part Moved	☐ Wrong Stock Pulled
☐ Crushing	☐ Countersink	☐ Misaligned/off center	☐ Positioned Wrong	
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☐ Inspection Strip in Tube	☐ Drawing	☐ Misread	______	
☐ Marks/Chatter	☐ Drill Holes	☐ Off-set	______	
☐ Turning Sequence	☐ Finish	☐ Out of Calibration	______	
☐ Wave/Twist in Tube	☐ Fit/Function	☐ Out of Sequence		

DART

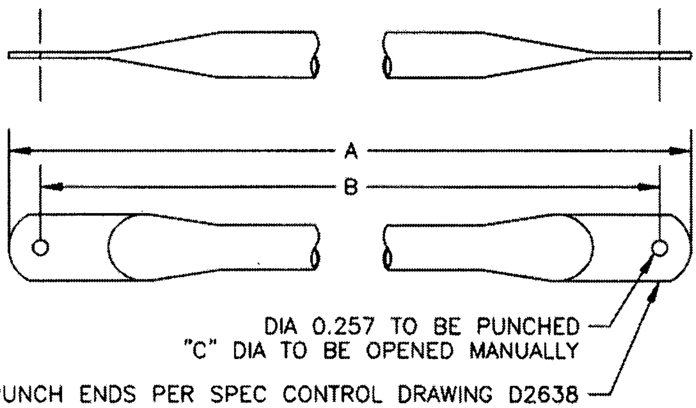
QA COPY ISSUED

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2565 — REV. E — SHEET 1 OF 1
DATE 04.05.05		TITLE STRUT — SCALE 1:3

A	96.05.03	NEW ISSUE
B	97.03.15	CORRECT D2565-111 DIM. A
C	98.10.05	UPDATED MATERIAL NOTE (TSR A603)
D	02.06.05	ADD -3XX PARTS; ADD FINISH
E	04.05.05	ADD D2565-401-411; RMV ANGLE D

RELEASED 04.05.05

PART #	A	B	DIA C
D2565-101	20.52	19.72	0.316
D2565-103	18.21	17.41	0.316
D2565-105	20.19	19.39	0.316
D2565-107	13.43	12.63	–
D2565-109	12.31	11.51	–
D2565-111	13.65	12.85	–
D2565-201	22.79	22.00	0.316
D2565-203	20.75	19.95	0.316
D2565-205	21.22	20.42	0.316
D2565-207	16.07	15.27	–
D2565-209	15.16	14.36	–
D2565-211	14.14	13.34	–
D2565-301	27.03	26.23	0.316
D2565-303	25.34	24.54	0.316
D2565-305	23.73	22.93	0.316
D2565-307	20.86	20.06	–
D2565-309	20.17	19.37	–
D2565-311	16.30	15.50	–
D2565-401	18.29	17.49	0.316
D2565-403	15.64	14.84	0.316
D2565-405	19.45	18.65	0.316
D2565-407	10.79	9.99	–
D2565-409	9.34	8.54	–
D2565-411	13.81	13.01	–



GENERAL NOTES

1) MATERIAL: AISI 304/316/318 SS 0.750 OD X 0.049 WALL
(REF DART SPEC. M304TR0.750W0.049)
ENSURE SEAMLESS TUBE IS USED
2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
3) TOLERANCES PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES

109635 MLS 13-1-22

DART AEROSPACE LTD

DART AEROSPACE

Description: Struts		Work Order: 109635
Inspection Drawing: D2565	Rev: E	Part Number: D2565 -107

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
13.43	+/-.030	13.43	✓		T	SB-5
12.63	+/-.030	12.63	✓		T	SB-5
Ø.257	+/-.005	Ø.257	✓		U	SB-11

Measured by: DAS 30 9-89	Checked By: DAS 36 9-89	QC inspector:	Engineering Approval (*if necessary*):
Date 13/11/26	Date 13/12/10	Date	Date